

(2) Methodology Development

Research on methodology development may be divided into the two areas of LCI and LCIA. There is a universal understanding on the framework of LCI based on that proposed by ISO which is utilized here. Therefore, research related to LCI has centered on technical issues such as allocation, data quality and data format.

On the other hand, research on methodology development for LCIA includes fundamental research of weighting methodology and generation of weighting factors that reflect the characteristics of the Korean situation. From October 1998, KAB and KSLCA are jointly working on an MOCIE-sponsored 5-year project to firmly establish the weighting methodology and to calculate the environmental index for major raw materials, processes, energy, transportation, and waste treatments through the computation of the weighting factor. This may enhance design and production of environmentally-friendly products by industry.

(3) Database Construction

Along with the development of LCA methodology, the constructions of relevant databases are absolutely necessary for the efficient practice and promotion of LCA. MOCIE has been actively supporting KSLCA for the development of public databases. Last year, KSLCA initiated a 5-year national research project (1998 – 2003) for about 100 modules of representative raw materials, energy, processes, transport, and waste treatments. During this first year, inventory databases for ethylene, propylene, polypropylene (raw materials), electricity (energy), injection molding (process), and trucking (transportation) are being established. For raw materials, processes, and transportation, the data represent primary information compiled from a representative set of producers and/or users. National average data are collected

and analyzed for electricity since the electricity supply system in Korea is the so-called 'circle network system' which connects the whole country into an electric ring structure.

(4) Case Studies

Supported by the numerous efforts of government and KSLCA to promote LCA, the industrial sectors, especially the large conglomerates, are starting

- to carry out LCA practices for their own products to cope with the ISO 14000 series
- to evaluate potential environmental impacts associated with their products
- to use LCA results for DfE and environmental labeling.

So far, most of these case studies remain at the LCI level since LCIA methodology is still rather weak. For a country like Korea, which imports most of its raw materials from overseas and exports the final product, the practice of LCIA is especially difficult.

Small and medium size enterprises are not as active as large industries. There are very few LCA case studies from S&ME because of budgets restrictions and human resources. Therefore, they are training experts in their own way by participating in LCA-related education programs and workshops sponsored by KSLCA.

4 Summary

KSLCA is still in an early stage of its status. In order to be a focal point for sharing information, databases, and experiences on LCA, persistent efforts by the KSLCA must be continued. With environmental protection continuing to gain importance within the global economic framework, it is expected that LCA will be rapidly vitalized within all aspects of our society. In parallel, the KSLCA will stabilize in Korea very soon.

Life Cycle Assessment Society of Japan (JLCA) and Japan LCA Forum

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Current Status and Needs for Life Cycle Assessment Development in Asian/Pacific Regions

Japan (p. 192, right column)

The key players in the LCA activities are the government, research institutions, industry and academia. The organizational structure of the LCA activities in Japan was not provided.

The cooperation of the industries, government and academia has proven to be very important in advancing LCA activities in the country. With the support of the Ministry of International Trade and Industry (MITI), 250 national, industrial and academic organizations came together in the Japan LCA forum and identified the

needs for LCA development in Japan. As a result of the forum, MITI has provided funds and support for a five-year national project on LCA. The national project's objectives are to develop a standardized LCA methodology for Japan, LCA database, networking systems for LCA information, and applications of LCA in various fields (e.g. industrial production, marketing, environmental administration, promotion and popularization). As LCA requires data not only from local sources, Japan hopes to cooperate with other countries in developing LCA databases.

Please note: There are two organizations in Japan, the "Life Cycle Assessment Society of Japan (JLCA)" and the "Japan LCA Forum". The above chapter refers to the JLCA (Life Cycle Assessment Society of Japan).

Life Cycle Assessment Society of Japan (JLCA)

Number of members: 419, 160 companies, 54 industrial associations.

The management of this organization is supported by government and membership fees. The activities are primarily concentrated on the promotion of LCA, and the development of LCA methodologies. The Japanese name of the society is "LCA Nihon Foramn", which can cause some misunderstanding.

Japan LCA Forum

About 10 companies (mainly package companies). The management is carried by the funds of these companies. Regularly, several workshops are held.